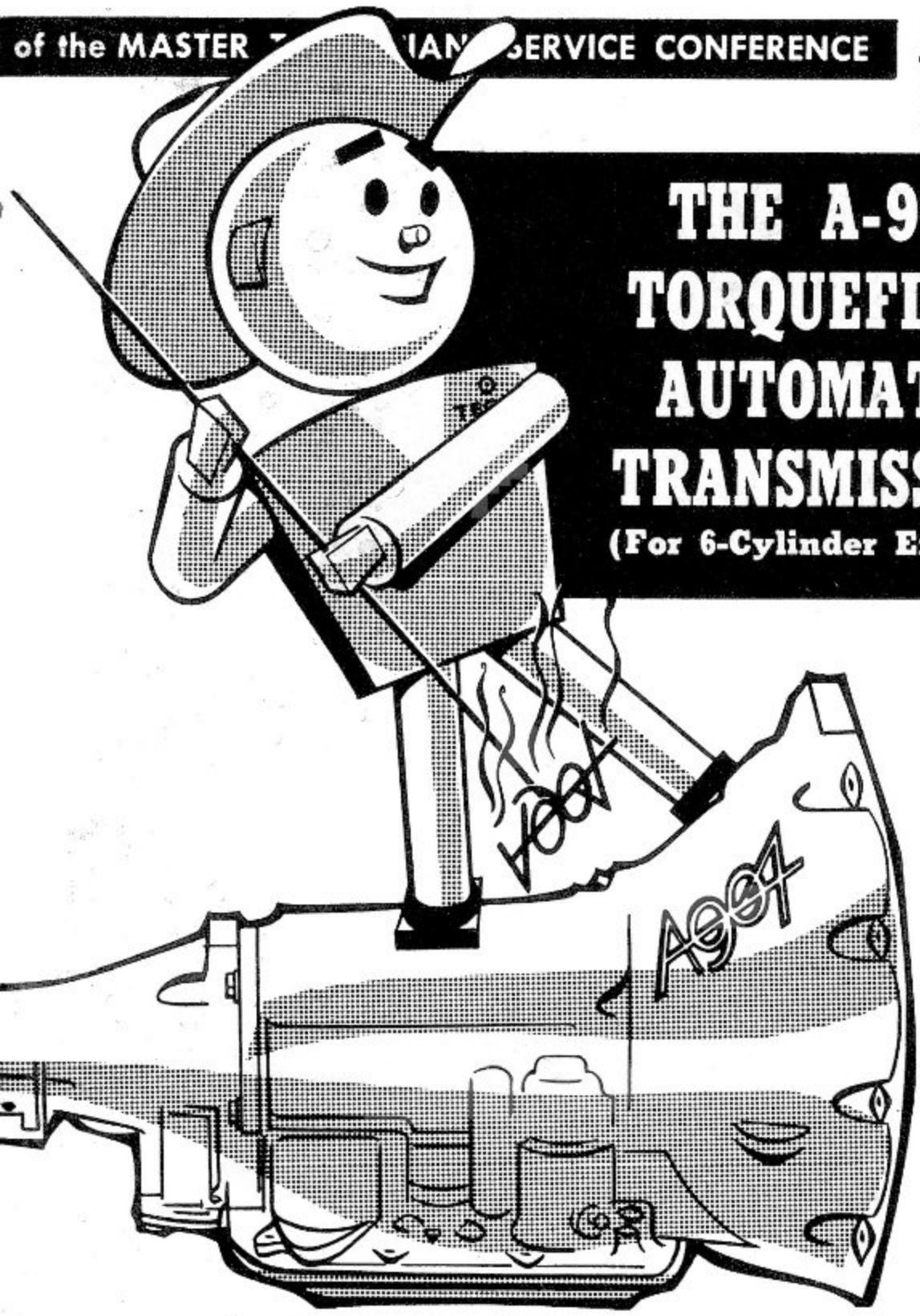
SERVICE REFERENCE BOOK

of the MASTER [illegible] SERVICE CONFERENCE

session no. 145

THE A-904 TORQUEFLITE AUTOMATIC TRANSMISSION

(For 6-Cylinder Engines)



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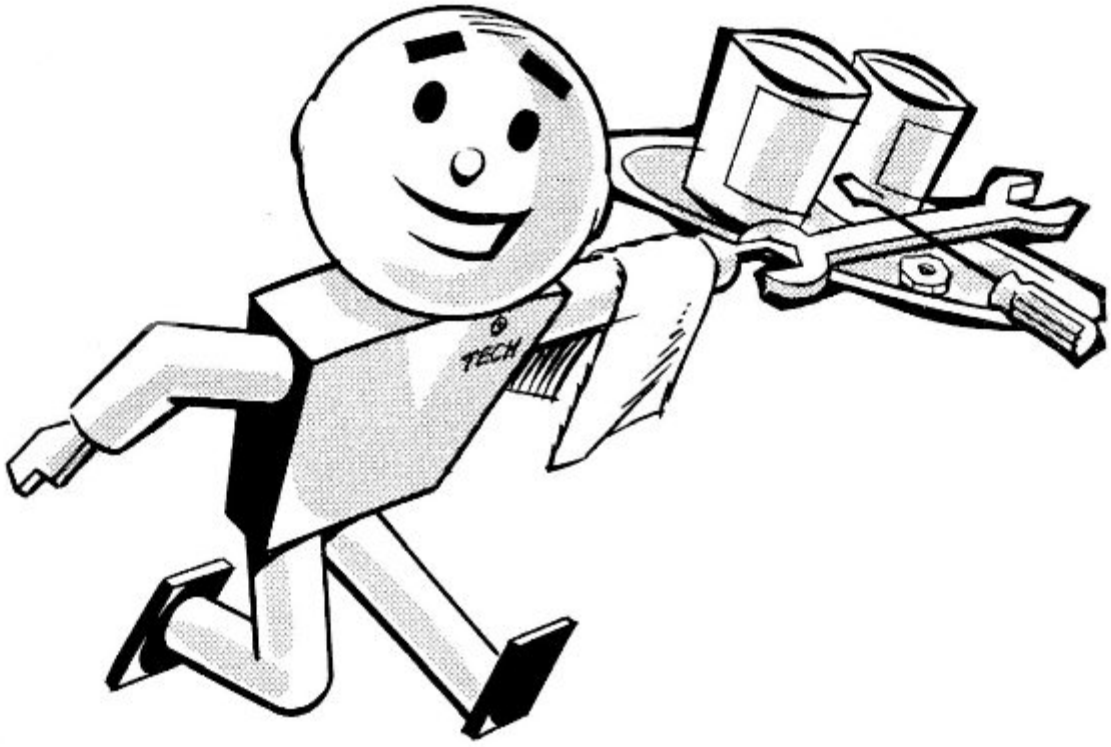
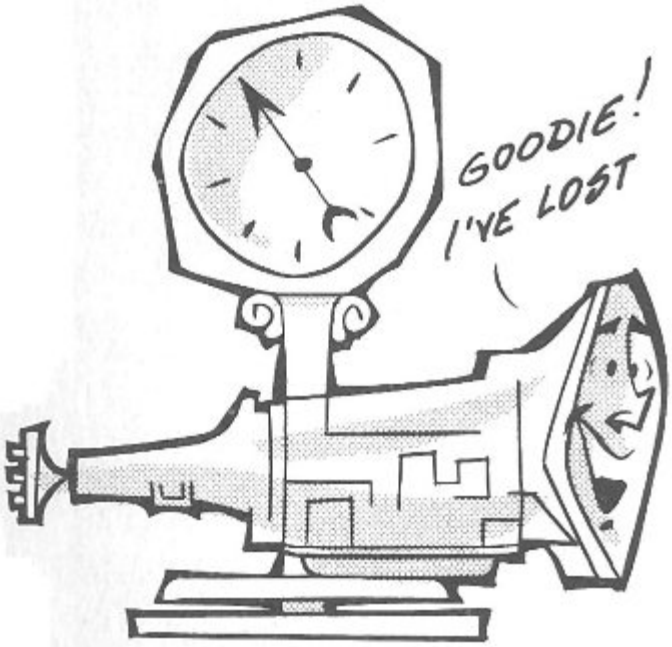


TECH SEZ: "GIVE A-904 TORQUEFLITE YOUR BEST IN SERVICE!"

The A-904 TorqueFlite automatic transmission will win many new friends among our Plymouth, Dodge Dart, and Valiant owners. So, any work you do on the new unit is important. You've got to give it your best!

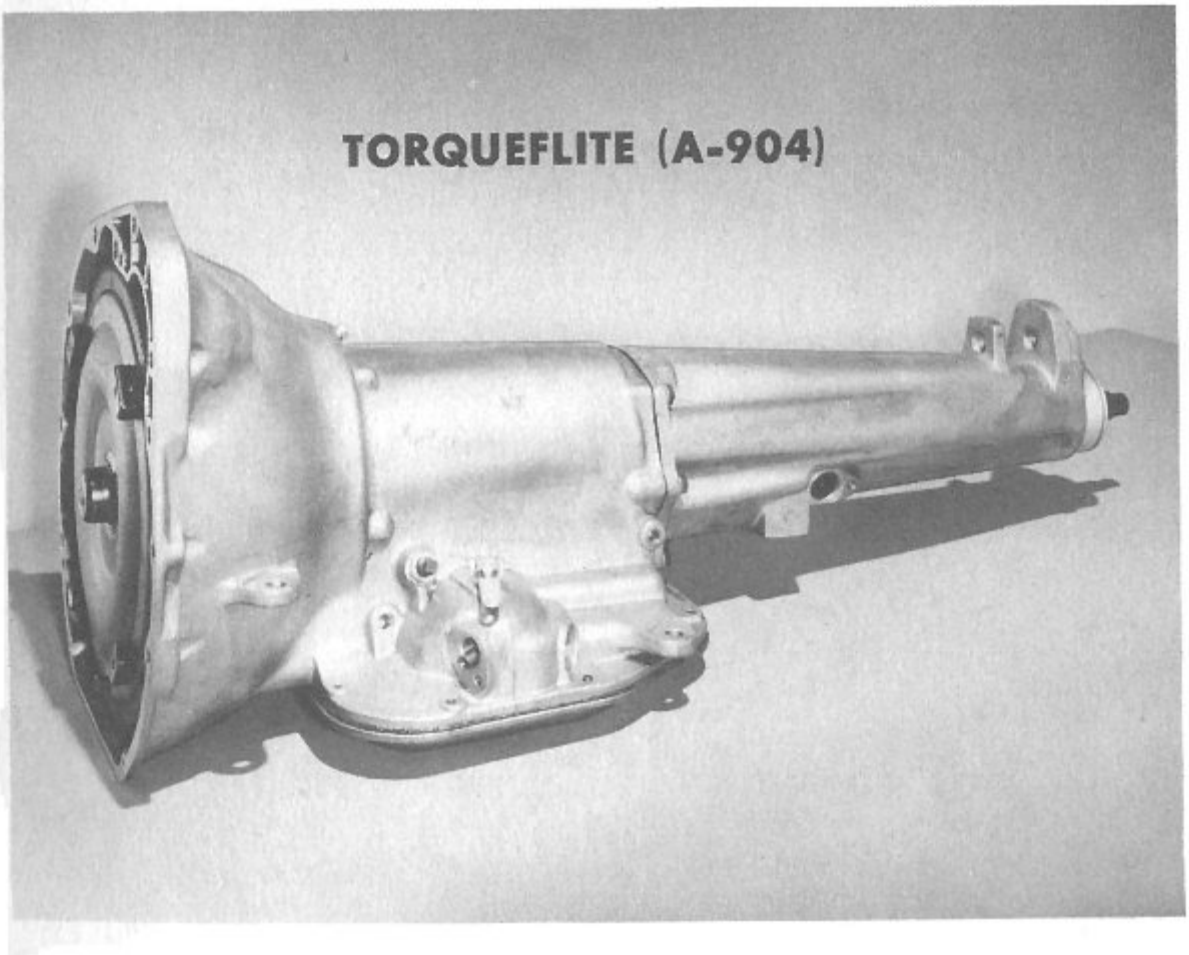
To help you do your part, this reference book outlines all that's new in design and operation, and covers new service procedures that apply. Here's how this timely story is arranged:

THE NEW A-904 TORQUEFLITE AUTOMATIC TRANSMISSION



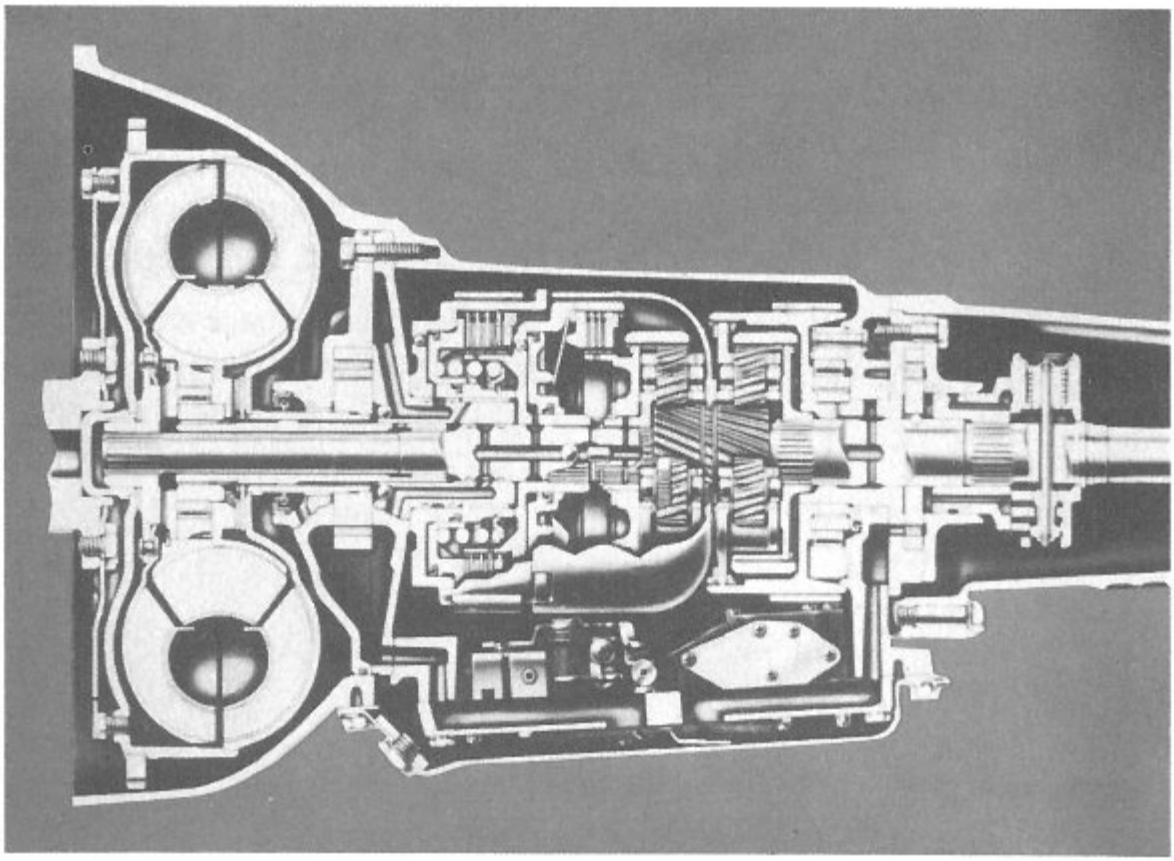
Description

General. The A-904 TorqueFlite is a three-speed automatic transmission that's a lot like the A-466 TorqueFlite in operation. It's smaller, of course, and weighs only a few pounds more than the manual transmission. It has the same gear ratios as the A-466 TorqueFlite, and provides excellent breakaway performance and outstanding fuel economy.



Another feature you'll notice is that the new TorqueFlite is more compact than the highly successful, time-tested A-466 TorqueFlite unit with which you are already familiar. It's lower, makes possible a lower tunnel in the floor pan and provides more passenger compartment space. Also, fewer parts are required.

Perhaps the biggest feature is the entirely new arrangement of internal parts. Because of this, it was possible to eliminate the intermediate shaft and reduce the length of the unit.

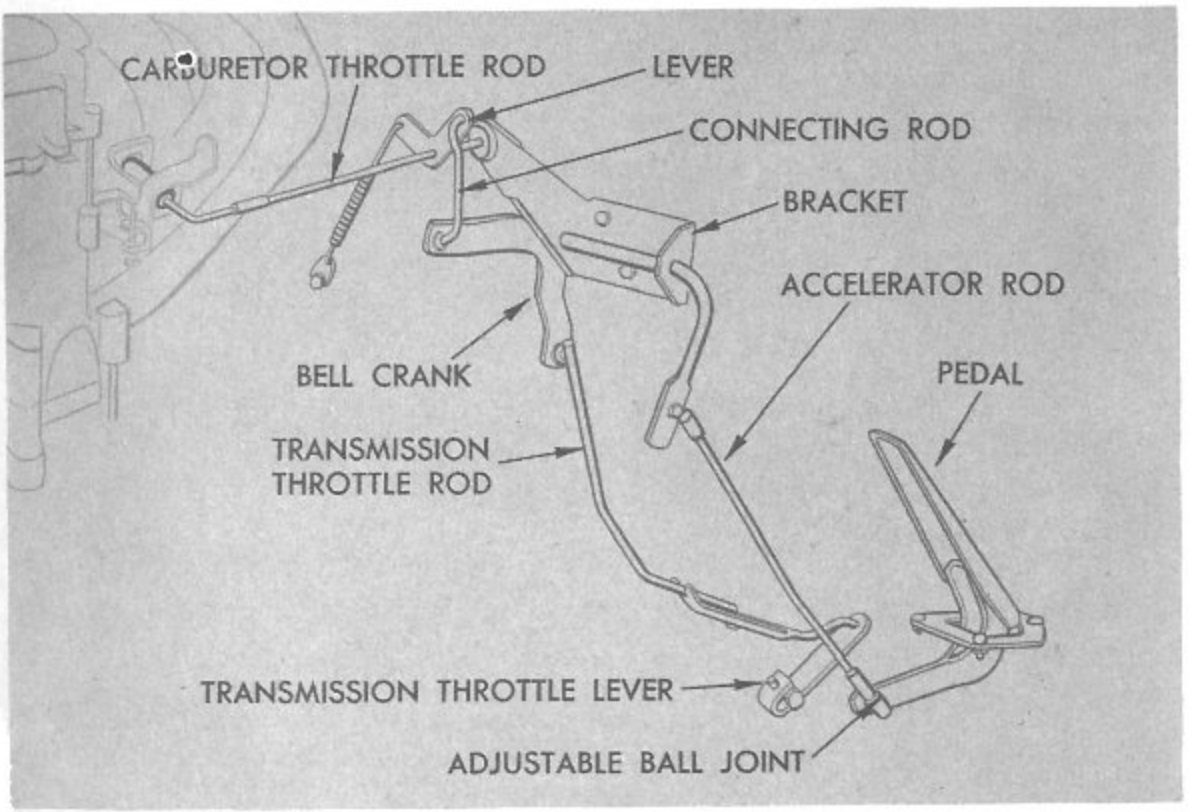


Now, *operation* of the A-904 TorqueFlite transmission is virtually the same as the A-466 TorqueFlite transmission. However, there are a few differences. When the number "1" button on the new TorqueFlite unit is pushed in, the transmission will *not* upshift to second. When the number "2" button is pushed in, the transmission will not upshift to *direct*—even at high speed.

In view of these differences, owners will have to be told not to exceed 60 m.p.h. with the number "2" button in or 30 m.p.h. with

the "1" button in because the engine might be damaged. What's more, at speeds above 60 m.p.h., the number "2" or the number "1" buttons should *not* be pushed in for engine braking. If this is done, the transmission will downshift to second immediately. Throwing a sudden load like that on the engine might cause damage.

Throttle Linkage Differences. Another feature that is different is the throttle linkage system. There's a one-piece carburetor throttle rod that rotates. This differs from the former type that had a fore-and-aft movement.

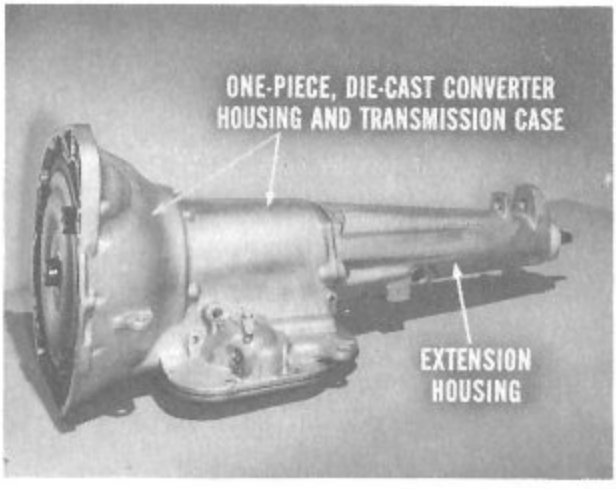


A small rod connects a lever on the carburetor rod to the accelerator shaft bell crank mounted in a bracket on the dash panel. An adjust-

able, two-piece transmission throttle rod connects the other leg of the same bell crank with the transmission throttle lever. An accelerator rod, with an adjustable ball joint, connect the pedal with the same bell crank assembly. You can shorten or lengthen the rod to obtain the proper pedal angle. The correct angle provides a kickdown before the pedal touches the floor mat.

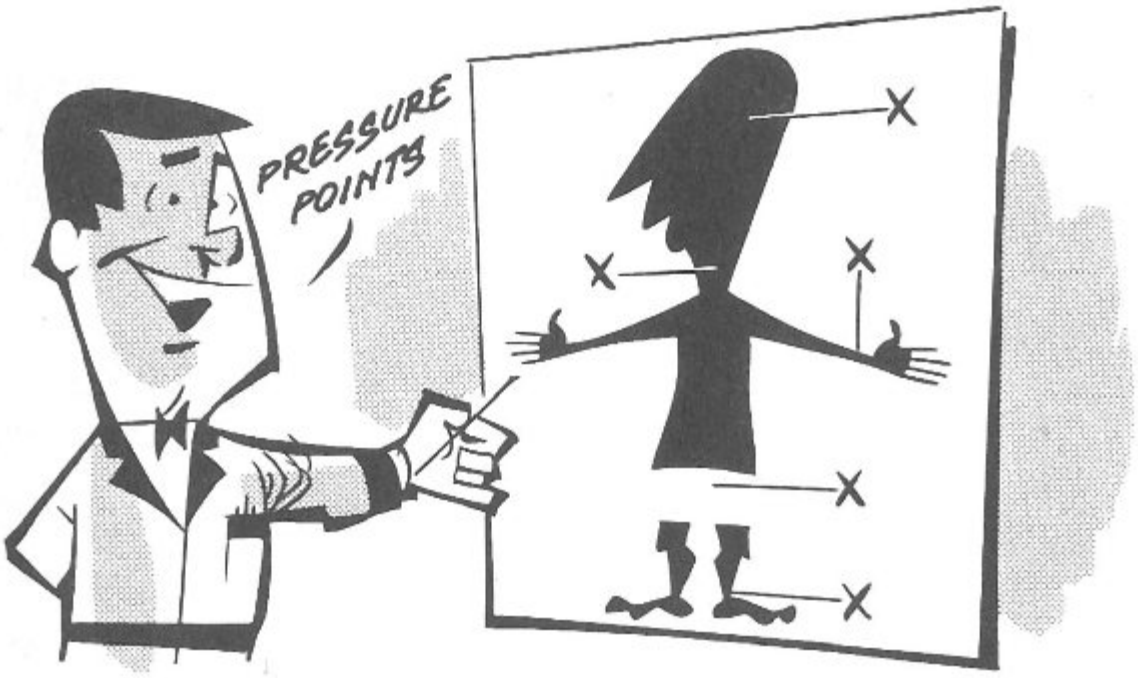
Water-Cooling Arrangement. One external feature you'll recognize is the water-cooling arrangement for the transmission fluid. The same tubing, heat exchanger, outlet and return pipe taps are used in just about the same locations.

A very important external feature is that the torque converter housing and transmission case is now a one-piece, aluminum die-casting. It's lighter, but stronger, and provides greater rigidity. The new extension housing is also aluminum.

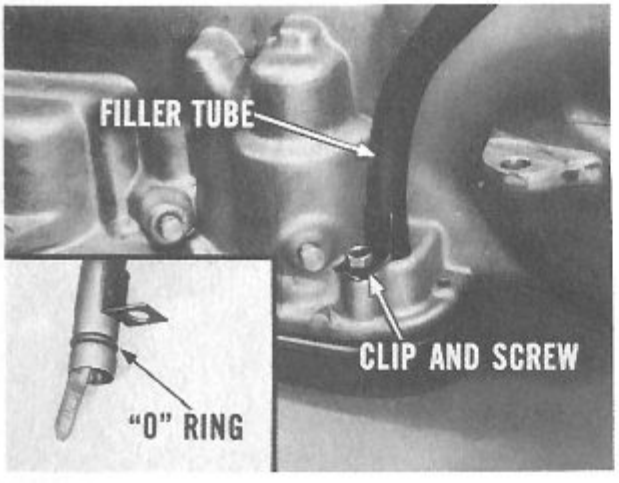


Pressure Tap Locations. Take-off taps for installing pressure gauges are in new locations. You'll find them on the right side and left rear corner of the housing. The front servo release and front clutch apply tap is at the lower part of the front servo cylinder on the right side. The line pressure tap is in the accumulator cylinder, also on the right side. Just to the rear of the accumulator, you'll see the rear servo apply pressure tap. It's on the rear face of the rear servo cylinder. The governor pressure tap on

some models is in the lower left side of the extension housing mounting flange. On other models, the governor tap is in the rear face of the case—on the lower left side.



NOTE: Some early A-904 TorqueFlite units have been built without a governor pressure tap. On these, governor pressure can't be tested.



Filler Tube and Speedometer Pinion Attachment. You'll notice a filler tube improvement. The tube, with its dipstick, fits in a vertically drilled hole in the lower right front corner of the transmission case. It has an "O" ring seal and is attached with a clip and screw.

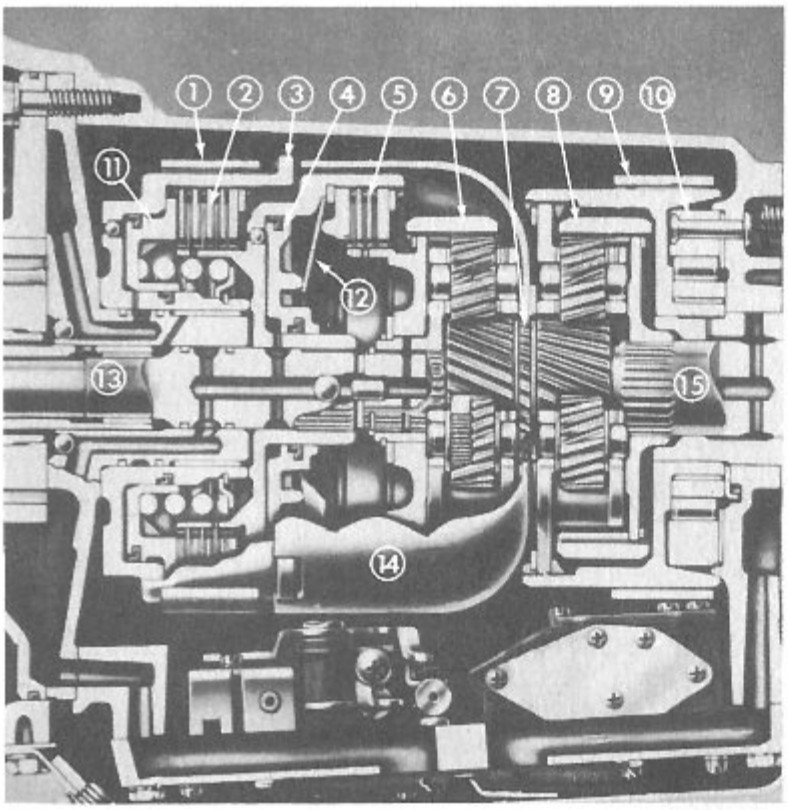
The same type of clip-and-screw attachment is also used to secure the speedometer drive pinion and sleeve on the left side of the extension housing. An "O" ring, in the pinion sleeve groove, protects against fluid loss at that point.

Drain Plugs. When you need to drain transmission fluid, be sure to drain the torque converter as well as the transmission. Raise the car on the hoist. Remove the cover plate attaching screws in front of the torque converter housing and lift off the plate to get to the drain plug in the front face of the converter. Another drain plug is in the front edge of the oil pan.

CAUTION: Cars that have been driven just before being raised on the hoist will have hot fluid that can cause burns, if you're not careful.

Turn the converter until its drain plug is at its lowest point. Carefully remove the plug to drain the converter. Also remove the oil pan drain plug to drain the transmission.

Internal Unit Arrangement. Internally, parts are arranged differently. The front clutch has four discs. The kickdown band encircles the front clutch retainer. The clutch piston applies pressure on the discs *from the front!* That's just *opposite* to the direction of piston movement in the TorqueFlite Eight transmission.



LEGEND

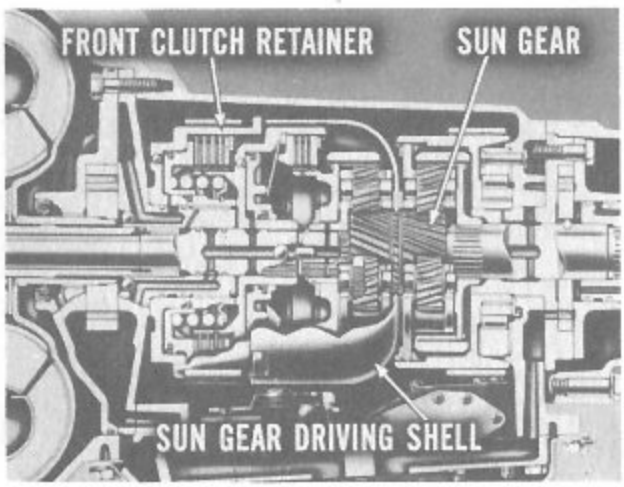
1—KICKDOWN BAND
2—FRONT CLUTCH
3—CLUTCH RETAINER
4—PISTON
5—REAR CLUTCH
6—FRONT PLANETARY GEARSET
7—SUN GEAR
8—REAR PLANETARY GEARSET
9—LOW AND REVERSE BAND
10—OVERRUNNING CLUTCH
11—PISTON
12—BELLEVILLE WASHER
13—INPUT SHAFT
14—DRIVING SHELL
15—OUTPUT SHAFT

The rear clutch has three discs. The rear clutch piston also applies pressure from the front. The rear clutch, furthermore, uses a Belleville washer instead of a coil return spring and lever system.

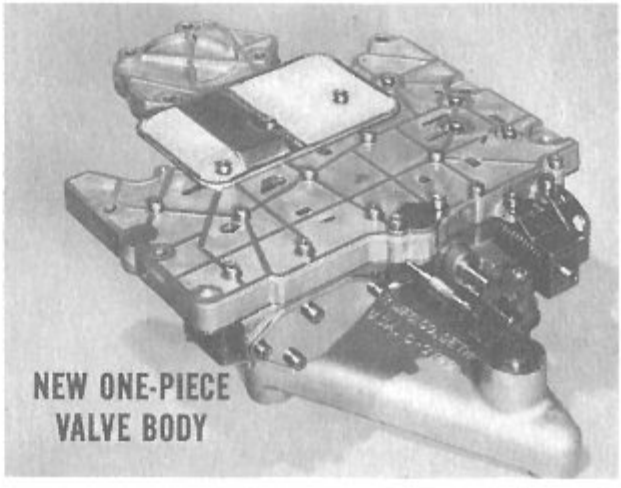
Located to the rear of the clutches are the front and rear planetary gearsets. Planet pinions of these planetaries mesh with a common sun gear. The low and reverse band encircles the rear planetary drum. An overrunning clutch is located to the rear of the rear planetary gearset.

The reverse band adjusting screw, incidentally, is on the *inside* of the unit. This means the transmission must be drained and the oil pan removed before you can adjust the reverse band. The kickdown band adjusting screw, though, is reached from the outside, as on other transmissions.

Locating the direct and reverse clutch forward in the unit made one big improvement possible. The front clutch retainer is attached to a driving shell. The driving shell transmits drive from the front clutch retainer to the sun gear. As a result, the intermediate shaft, as well as its support bulkhead, became unnecessary. They were eliminated, which made it possible to reduce the over-all length of the transmission, as compared to the TorqueFlite A-466 unit.

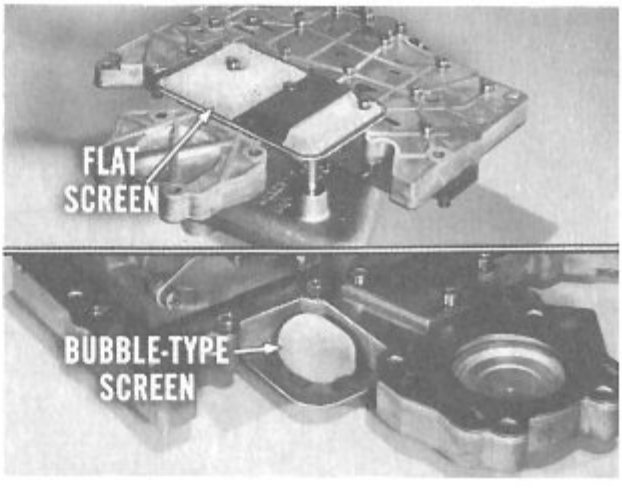


Valve Differences. One outstanding hydraulic feature is a redesigned one-piece valve body. In addition to the other valves, the body contains the torque converter valve, the regulator valve, and the front and rear pump check valves. These valves were formerly in a *separate* valve body. There are now eight regulating and flow control valves, two poppet-type pump check valves, six steel check valve balls (one is larger than the others), and a reverse blocker valve in the valve body. The control valves are the manual valve, throttle valve, kickdown valve, 1-2 shift valve, 2-3 shift valve, and the shuttle valve.



The throttle valve lever stop screw is located on the valve body. Normally, there's no need to adjust this screw. But if the valve body is disassembled, be sure to readjust this screw. That's because it must be removed before removing the throttle and kickdown valve train.

The conventional flat oil screen is on the underside of the valve body. In addition, there is a bubble-type oil screen on top. Its function is to reduce foaming and keep air bubbles out of the valves.



Hydraulic action is different, of course, because *variable line pressure* is used instead of compensated throttle pressure. A throttle pressure plug, sleeve and line pressure plug are located at the end of the regulator valve opposite the spring. This setup regulates line pressure

according to throttle opening. Properly adjusted line pressure will vary from 55 psi at closed throttle to 90 psi at detent throttle opening.

The governor valve is contained in the governor valve body mounted on the output shaft. The accumulator is located between the kickdown servo and the low and reverse servo on the right side of the transmission.

Operation

Shift pattern. Shift patterns, for the most part, are quite similar to those provided by the A-466 TorqueFlite unit. Gear ratios, in fact, are identical. In breakaway, gear ratio is 2.45 to 1; in second (or kickdown), it's 1.45 to 1; ratio in direct is 1 to 1; in low it's 2.45 to 1; and in reverse gear, ratio is 2.20 to 1.

While Plymouth and Dodge Dart models have a 3.31 to 1 axle as standard equipment, two tire sizes are available. Shift patterns covering both tire sizes are listed in the chart below:

A-904 TORQUEFLITE SHIFT PATTERN CHART

THROTTLE OPENING	SHIFT	PLYMOUTH AND DODGE (3.31 to 1 Axle)	
		7.50 x 14 Tires	8.00 x 14 Tires
Closed	1-2	8-11 m.p.h.	8-11 m.p.h.
	2-3	12-14 m.p.h.	12-15 m.p.h.
	3-1	7-10 m.p.h.	7-10 m.p.h.
Wide Open	1-2	28-42 m.p.h.	29-43 m.p.h.
	2-3	60-72 m.p.h.	61-74 m.p.h.
Kickdown	3-2	57-69 m.p.h.	58-70 m.p.h.
	3-1	27-39 m.p.h.	27-40 m.p.h.

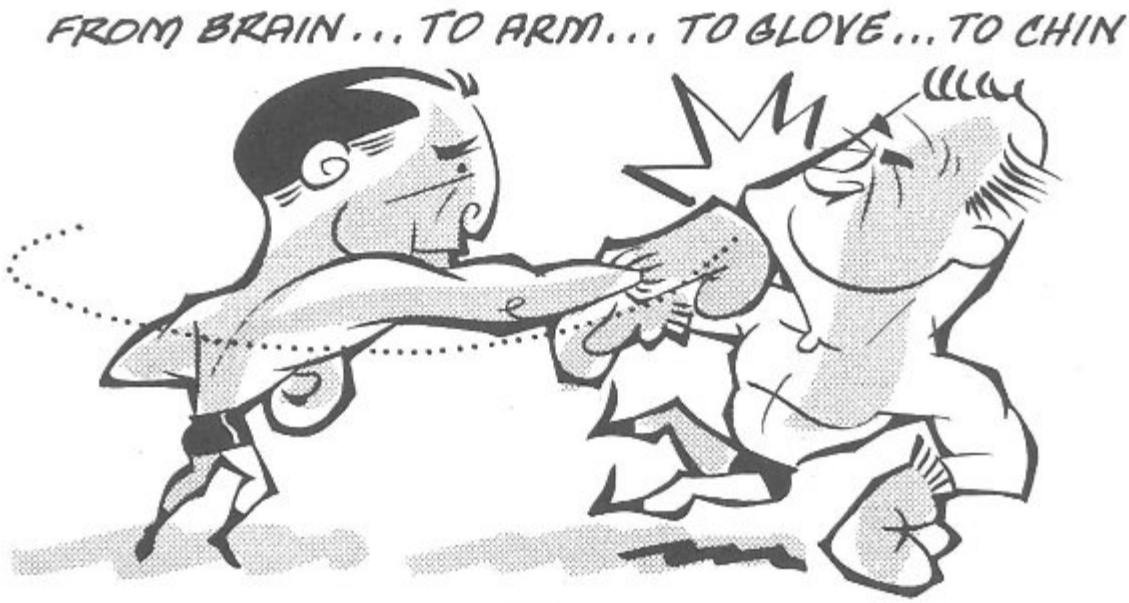
CAUTION: To avoid excessive engine speeds, cars with the A-904 TorqueFlite transmission should not be operated in manual low or second, at speeds above their wide-open throttle upshift limits.

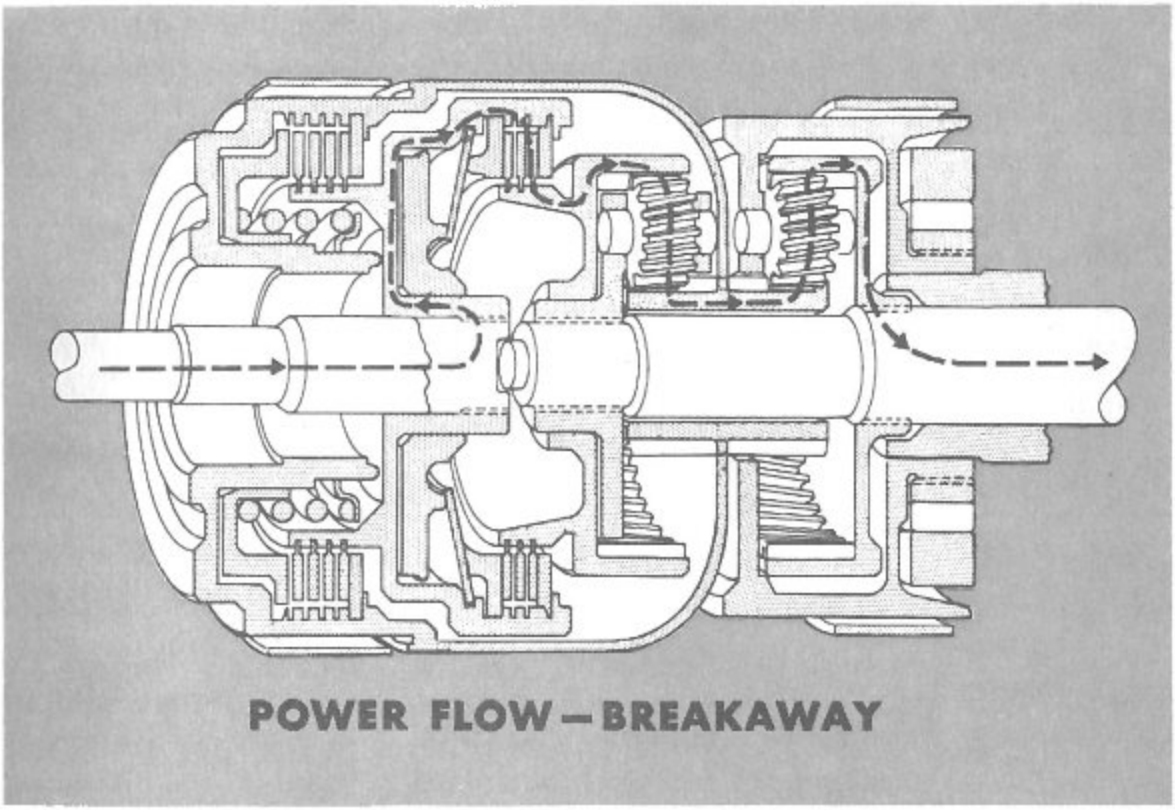
Internal Operation. The *clutch engagement action* during breakaway, second, low and in reverse is just *opposite* to that which takes place in the TorqueFlite A-466 because the clutch location is reversed. Kick-down and reverse band applications, however, are the same in both TorqueFlite units. The chart below outlines A-904 TorqueFlite clutch and band applications in the various push-button positions.

Button Position and Drive Condition	Front Clutch	Rear Clutch	Kickdown Band	Low and Reverse Band	Over-Running Clutch
N—Neutral	Disengaged	Disengaged	Released	Released	Overruns
D—Breakaway	Disengaged	Engaged	Released	Released	Holds
D—Second (or Kickdown)	Disengaged	Engaged	Applied	Released	Overruns
D—Direct	Engaged	Engaged	Released	Released	Overruns
L—Low	Disengaged	Engaged	Released	Applied	No movement
R—Reverse	Engaged	Disengaged	Released	Applied	No movement

Power Flow

Power flow through the A-904 TorqueFlite follows a different path than through the TorqueFlite A-466, because of the new arrangement of parts. Knowing how power flows during the various shift positions, will help you understand over-all transmission operation.





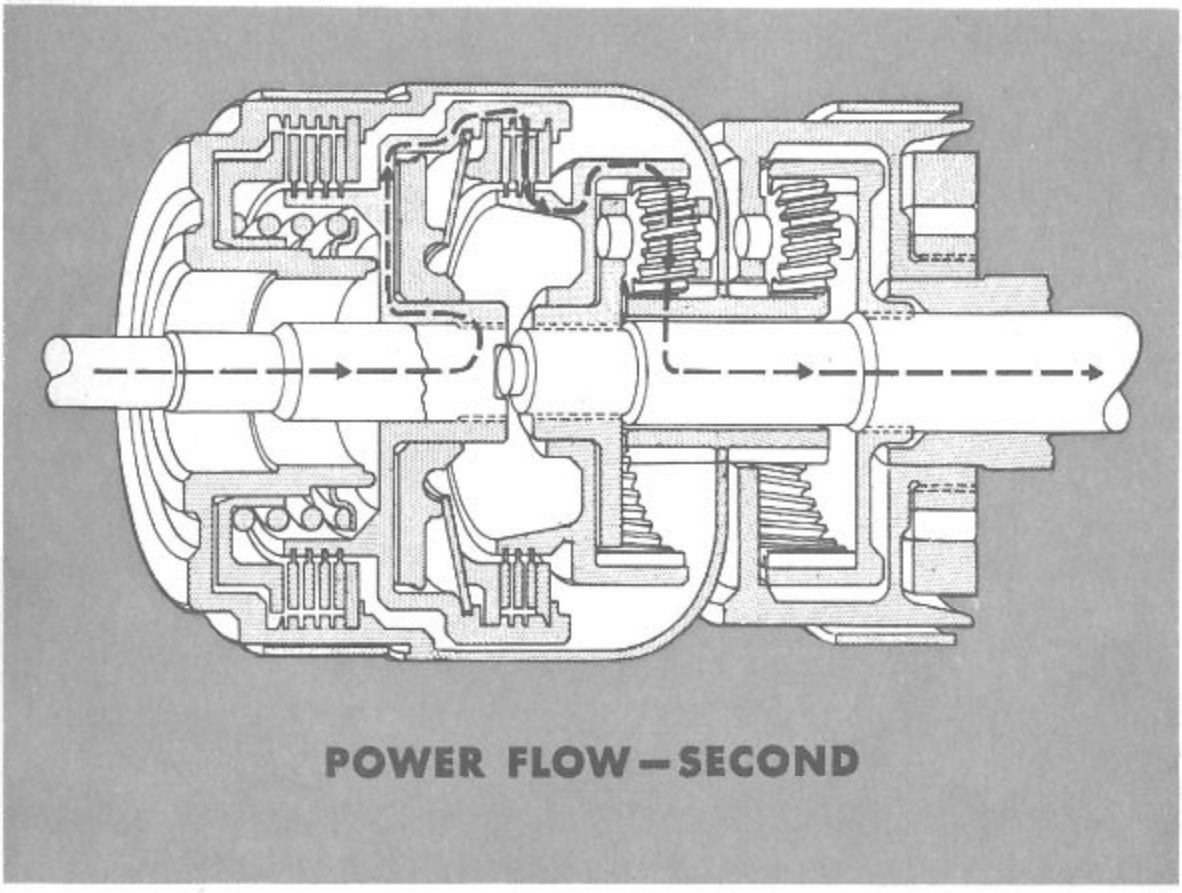
POWER FLOW—BREAKAWAY

Breakaway. In breakaway, the rear clutch is engaged and the overrunning clutch is holding. The flow of power is from the torque converter . . . through the input shaft . . . to the rear clutch retainer splined to the input shaft. Since the rear clutch is engaged, power flow continues through the rear clutch and to the front planetary annulus gear. This gear, in mesh with front planet pinions, drives the pinions in the same direction.

The planet pinions, in mesh with the sun gear, turn it in the *opposite* direction. Rotation of the sun gear, also in mesh with the rear planet pinions, turns these pinions in the same direction as the front planet pinions. The rear planet pinions are in mesh with the rear annulus gear which is splined to the output shaft. The pinions drive the annulus gear which, in turn, drives the output shaft.

The rear planetary pinion carrier is held stationary by the overrunning clutch on its hub. Gear ratio in breakaway is 2.45 to 1 due to the *combined reduction* of both planetary gearsets.

Second (or Kickdown). During second, the kickdown band is *applied* and the rear clutch is *engaged*. In this case, power flows from the input shaft to the rear clutch retainer. And, since the rear clutch is engaged, power continues to flow through the clutch to the front annulus gear. Now, because the kickdown band is applied, the sun gear driving shell and sun gear can't turn.

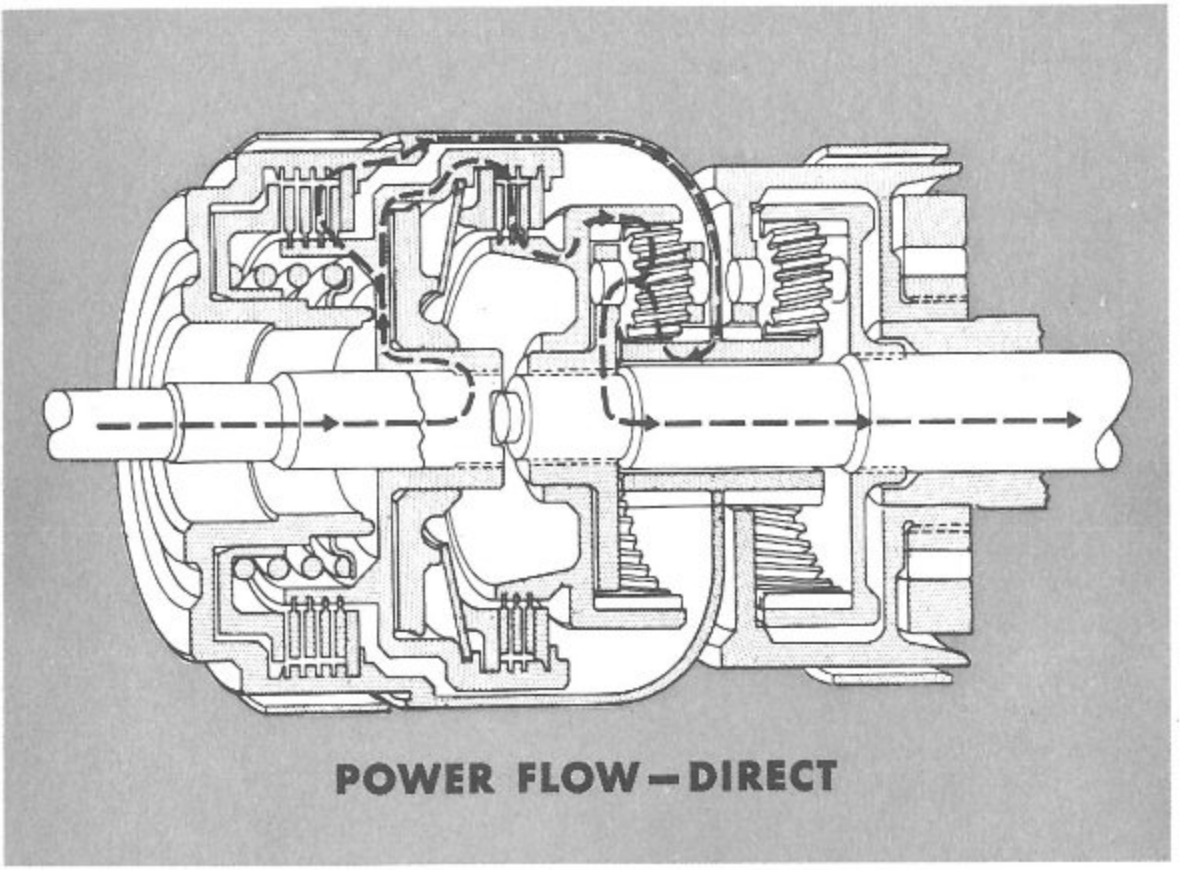


POWER FLOW—SECOND

Because the sun gear can't turn, the front annulus gear will walk the planet pinions around the sun gear and force the pinion carrier in the same direction. Since the front planetary pinion carrier is splined to the output shaft, it turns the shaft in the same direction. The carrier moves *slower* than the annulus gear, which results in a gear ratio of 1.45 to 1.

Direct Drive. In direct, *both* clutches are *engaged* and locked together since the front clutch hub and rear clutch retainer are integral. The rear clutch and front planetary annulus gear are connected through the clutch hub. The front clutch and sun gear are connected through

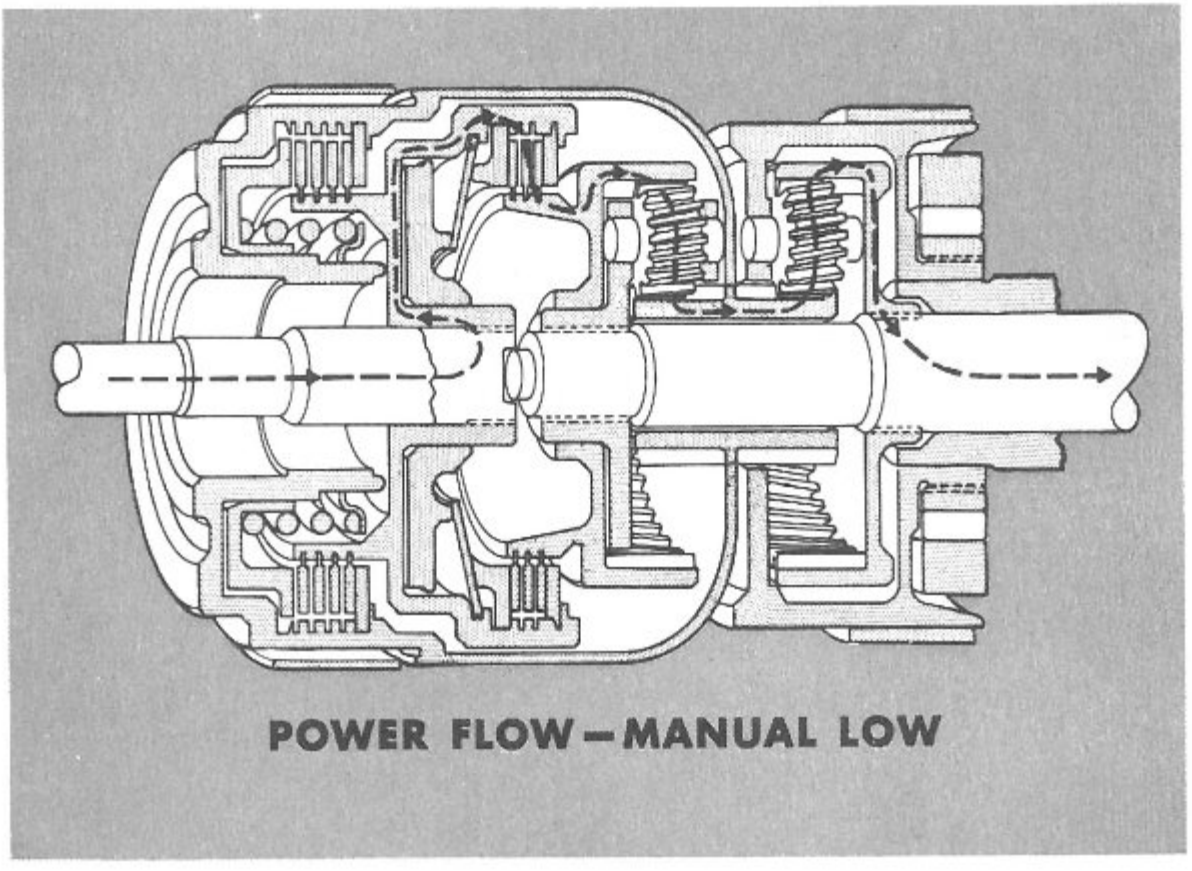
the driving shell. So the front planetary gearset, in effect, is locked up. It therefore turns as a unit along with the two clutches.



Power flow, in direct, is from the input shaft to the front clutch hub and rear clutch retainer. From there, power goes through the front clutch hub and to the front clutch retainer engaged to the sun gear driving shell, and to the sun gear. From there it goes through the planet pinions to the carrier, which is splined to the output shaft. There is an additional power flow from the rear clutch retainer, through the clutch and hub, and to the front planetary annulus gear.

Since the front planetary pinions are locked between the annulus gear and the sun gear, the planet carrier is turned with the complete unit. The planet carrier is splined to the output shaft, so it turns the shaft in the same direction. Gear ratio, of course, is 1 to 1 because all driving units are locked up and there is no gear reduction.

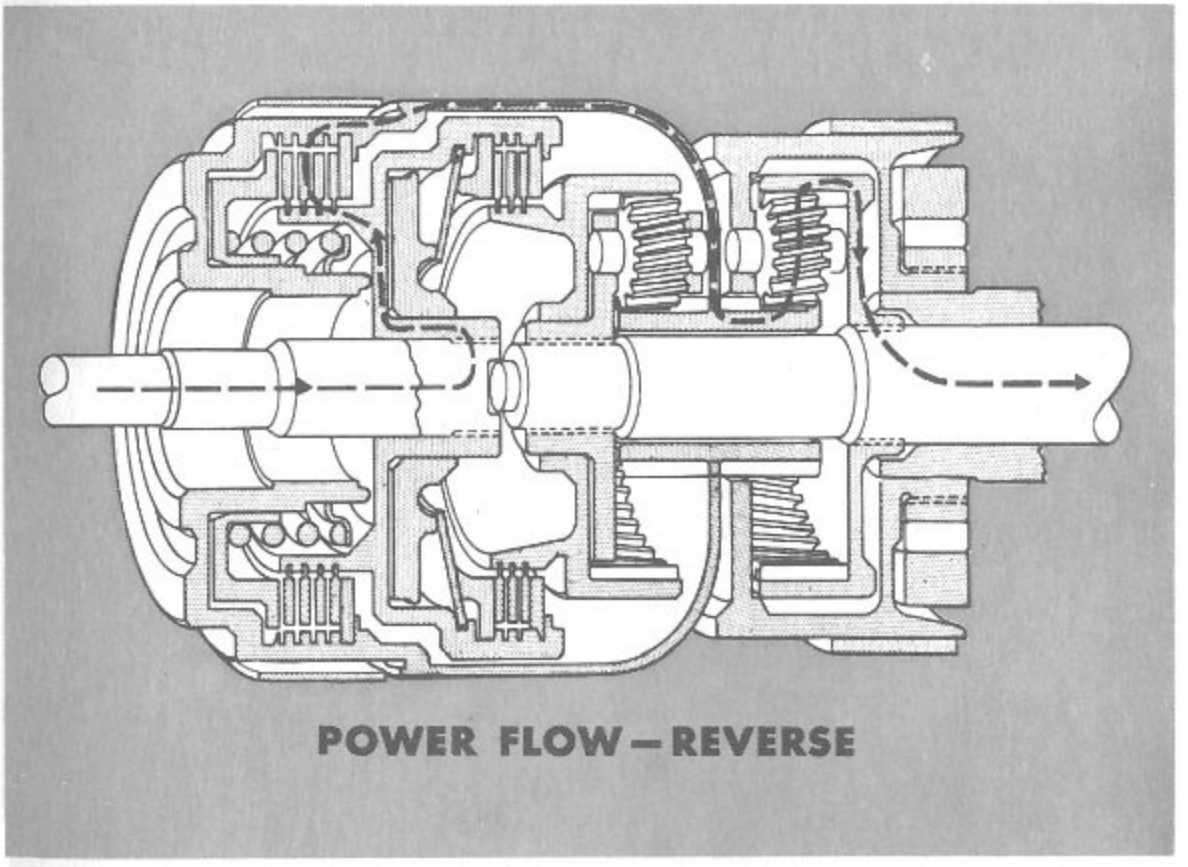
Manual Low (No. "1" Button In). This gear is used for pulling, or for slowing down the car when descending steep grades. Power flow in "manual low" is the same as it is in breakaway—through the rear clutch and both planetary gearsets—with one distinct difference.



POWER FLOW—MANUAL LOW

The *low and reverse band is applied* when you push the number "1" button in. When manual low is used as a retarding gear while the car is descending a steep grade, the output shaft tries to drive the engine through the gear reduction provided by the transmission. This, plus engine resistance at closed throttle, provides an effective braking force without using the brakes.

Reverse. In reverse the front clutch is *engaged* and the low and reverse band is *applied*. Power flows from the converter through the input shaft and the front clutch hub.



POWER FLOW—REVERSE

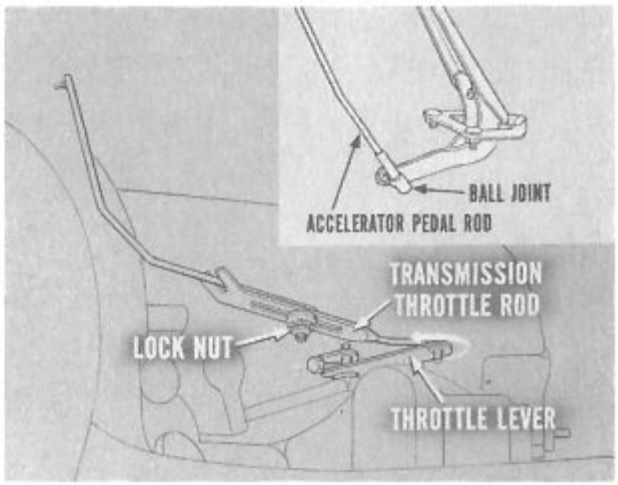
Because the front clutch is engaged, power continues to flow through the clutch to the front clutch retainer, and through the sun gear driving shell which is splined to the sun gear.

Since the *low and reverse band is applied,* the rear planet carrier is held stationary. So, when the sun gear rotates the planet pinions, they drive the annulus gear and output shaft in *reverse direction.* Gear ratio in reverse is 2.20 to 1. That differs from breakaway's 2.45 to 1 because only one planetary gearset is used in reverse.

Service Tips

Harsh Shifting. Harsh shifting, or clutch slippage during acceleration, is usually traced to incorrect throttle linkage adjustment. In a case of this kind, warm the engine up until the choke is wide open, and the

throttle lever is in idle position. Adjust engine idle to the speed specified for the new 6-cylinder engine. Next, loosen the lock nut on the two-piece transmission throttle rod. Then, move the transmission throttle lever *forward against the stop,* at the same time pulling back lightly on the bell crank end of the rod to remove slack. Hold the parts in this relationship and tighten the lock nut.



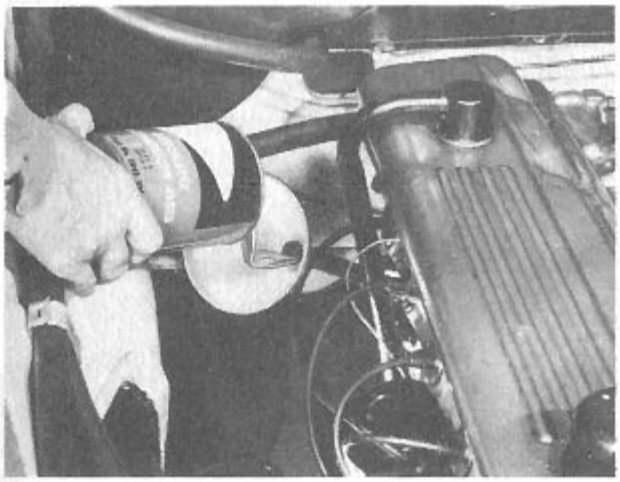
If accelerator pedal angle needs to be changed to obtain a kickdown just before the pedal compresses the floor mat or carpet, lengthen or shorten the accelerator pedal rod at the adjustable ball joint.

Kickdown Band Adjustment. You adjust the kickdown band as you always have. But after you torque the band to 47-50 inch-pounds, using torque wrench C-3380 and extension C-3790, back off the adjusting screw 2⅛ turns for proper clearance. Then, tighten the lock nut to secure the adjustment.

Low and Reverse Band Adjustment. Before you can adjust the reverse band adjusting screw, remember that you must drain the transmission and remove the oil pan. You can then adjust the reverse band about the same way you usually do. But after you torque the reverse band to 47-50 inch-pounds using the extension with the torque wrench, back off its adjusting screw 5¼ turns. Then, tighten the lock nut to secure the adjustment.

Lubrication. Use only automatic transmission fluid type "A", suffix "A". The A-904 TorqueFlite unit requires approximately 7 quarts U.S. measure, or 5.6 quarts Imperial measure. Check oil level the same way you check it on the TorqueFlite A-466 transmission.

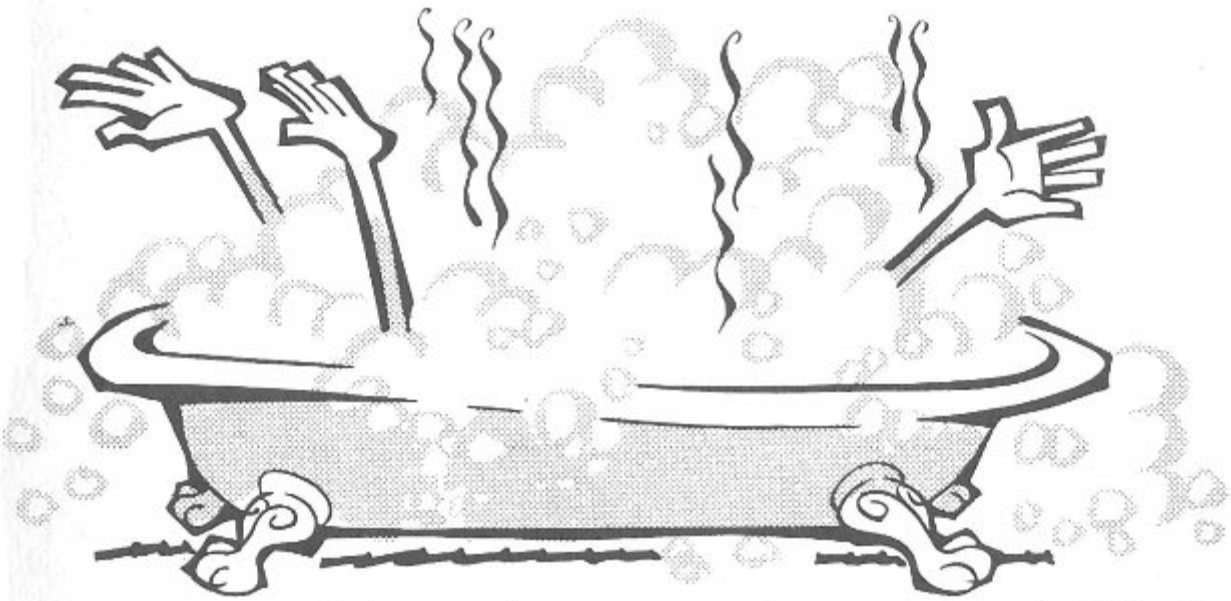
Drain, clean, and refill procedure is recommended at 10,000-mile intervals. Cleaning of the oil screens is especially important because the screens are smaller than those on the larger transmission.



Refill procedure on the new TorqueFlite is different. When you refill, pour in five quarts first (four quarts Imperial measure).

Then, start the engine. Accelerate the engine several times to fill the torque converter, and let the engine run several minutes more.

Then add one more quart, plus as much as necessary to bring the level up to the "add one pint" mark on the dipstick. That's where the level should be when the fluid is cold. Do not overfill the unit, or the fluid will foam up when it gets hot.

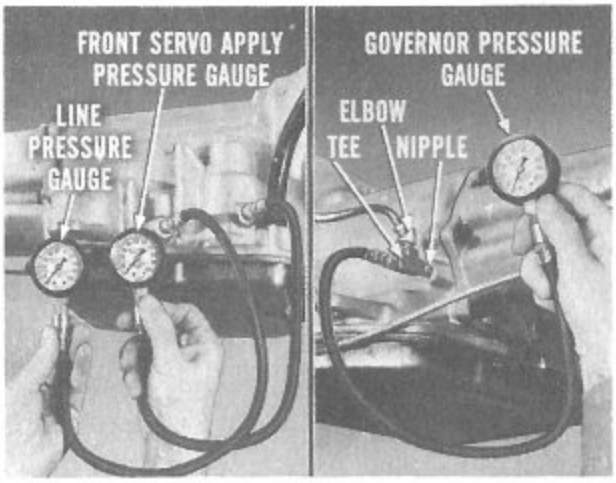


Pressure Tests. Before testing pressure, always measure fluid level. If you don't, you might get into disassembly operations that aren't necessary. And if the fluid level is all right, then it's wise to road-test the car to see if the shift patterns are correct.

If shifting patterns are okay, drive the car eight to ten miles to warm up the fluid to normal operating temperature. Measure fluid level again. It should be between the "add one pint" and "full" marks when the fluid is hot.

When fluid level is right, but the shift pattern is not within the specified range, test hydraulic pressures and make the necessary corrections. Put the car on the hoist and be sure both rear wheels are free to turn. Install a reliable tachometer, and adjust engine idle speed. Then turn off the ignition.

Remove plugs from the line pressure and front servo taps, and install two 0-to-100 psi pressure gauges (C-3292) in their places. If you have a third pressure gauge, you can save time by testing lubrication pressure at the same time. But to install this *third* gauge, disconnect the fluid return pipe at the transmission, and install a three-way tee.



Start the engine and push in the "D" button. Set engine speed at 800 r.p.m. Next, disconnect the throttle rod at the transmission throttle lever. Then, with the transmission throttle lever in *closed* position, wait for the unit to shift to direct. At that point, line pressure should be 51 to 59 psi. Front servo pressure should be more than 45 psi. Lubrication pressure should be 5 to 25 psi.

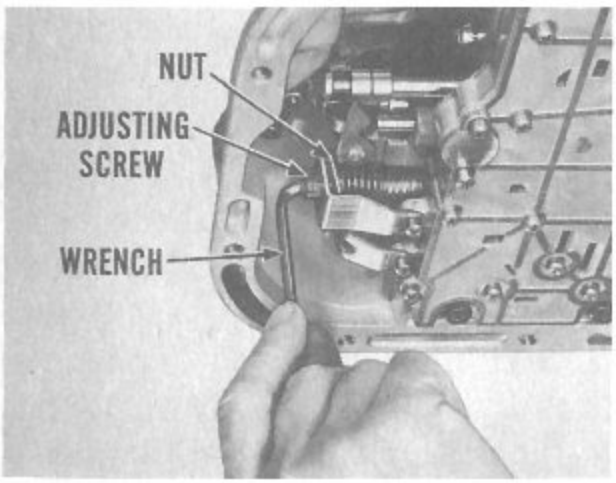
Keep engine speed set at 800 r.p.m. Next . . . move the throttle lever to almost full throttle position, until resistance is felt as the lever is moved to the rear. Line pressure at this throttle opening should range from 88 to 96 psi. Front servo release pressure should be more than 80 psi.

Front Servo Pressure Low. Suppose line pressure is all right, but the front servo release is less than the required 80 psi. This usually means there is too much fluid leakage in the front clutch circuit. Removal and disassembly would then be necessary in order to locate and correct the cause.

Line Pressure Low. If the 800 r.p.m. closed throttle line pressure reading was too low, you can usually correct the condition by adjusting the regulator valve spring load. To do this, turn the ignition off, drain the transmission and remove the oil pan.

CAUTION: Since the transmission fluid is hot, exercise caution when draining it.

There is an Allen adjusting screw on the valve body just ahead of the throttle lever shaft. Using a 3/16″ Allen wrench with ¼″ removed from the short end to permit it to enter between the screw and case, turn the screw in or out to adjust regulator valve spring load.



Turning *counterclockwise increases* line pressure and *clockwise reduces* it. *Each full turn* of this screw changes the 800 r.p.m. closed throttle line pressure *about 2 psi.* When the necessary adjustment has been made, reinstall the oil pan, fill the transmission to the prescribed level and recheck line pressure.

If you cannot get proper pressure readings by turning the screw, remove the valve body to disassemble, clean, and inspect the regu-

lator valve parts. Look for possible damage to the throttle pressure plug, the sleeve or line pressure plug, or the regulator valve spring. A *weak* valve spring will cause the faulty operation.

Governor Pressure Test. Some A-904 TorqueFlite transmissions were built without governor pressure take-off taps. On these, governor pressure tests cannot be made. But where there is a take-off tap, you should test pressure, especially if there's an upshift lag, no kickdown or downshift, or an erratic shift.

In these cases, remove the plug from the governor take-off tap and install a 0-to-100 psi gauge (C-3292). Check pressures according to the following table of specifications.

ENGINE SPEED	GOVERNOR PRESSURE LIMITS
1000 r.p.m.	28 to 32 psi
1400 r.p.m.	40 to 45 psi
2800 r.p.m.	73 to 83 psi

If pressures are not within the above limits, the governor valve is sticking and must be removed for cleaning and inspection.

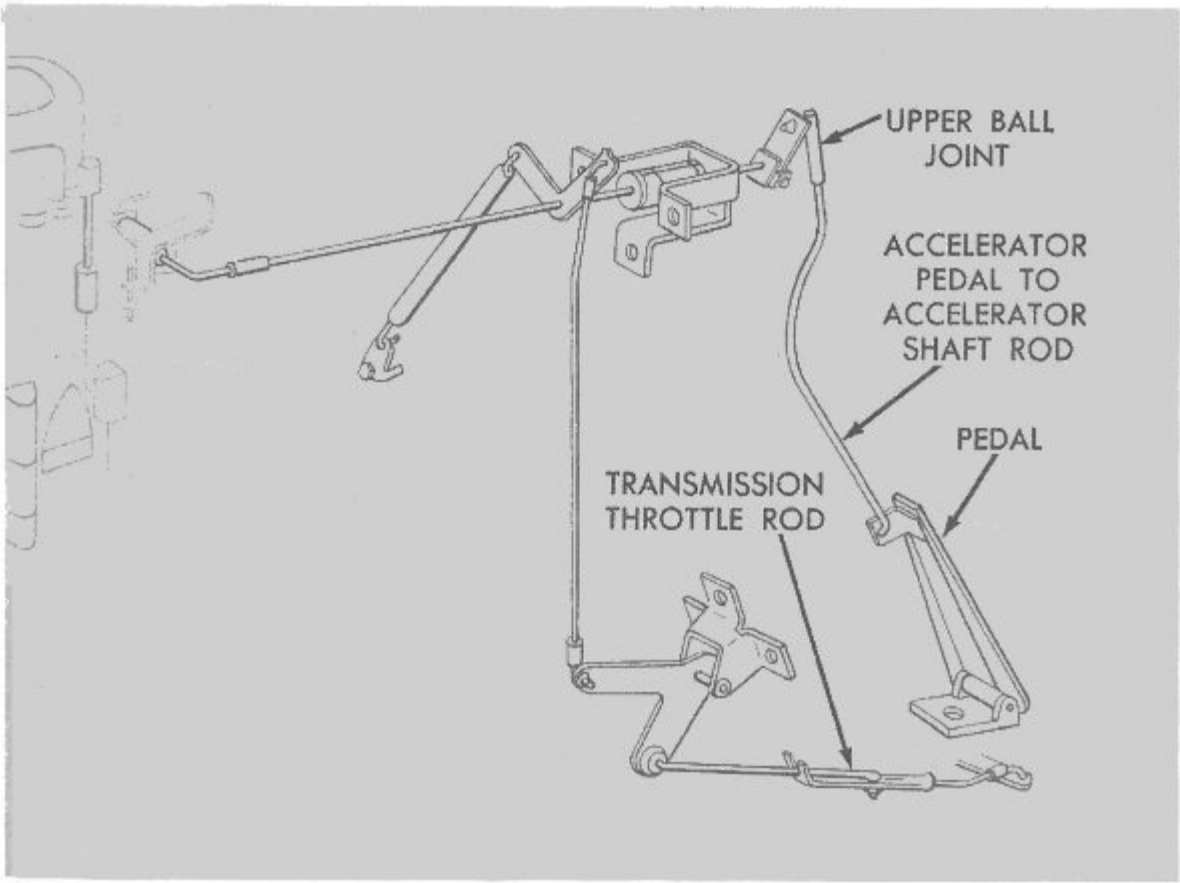
Rear Servo Apply Pressure Test. Remove the take-off tap plug at the rear of the rear servo cylinder. Install the 0-to-300 psi gauge (C-3293). Start the engine, shift the transmission into reverse, and set engine speed at 1600 r.p.m. You should read a pressure of 230 to 280 psi. If pressure is lower than that, it points to a leak in the rear servo circuit. This can be caused by a damaged ring on the servo piston, or a restriction in the circuit.

A-904 TORQUEFLITE IN THE VALIANT

Some differences between the A-904 TorqueFlite as used in the Valiant and the models mentioned earlier should be kept in mind. There's a throttle linkage adjustment, and a parking lock device that differ, along with some differences in shift patterns.

Throttle Linkage

The throttle linkage on the Valiant is the same as on other six-cylinder models except that the accelerator pedal to accelerator shaft rod is inside the driver's compartment. In order to get the proper pedal angle, you lengthen or shorten the accelerator pedal rod at the *upper* ball joint, under the instrument panel.



The transmission throttle rod is adjusted in the same manner as previously described.

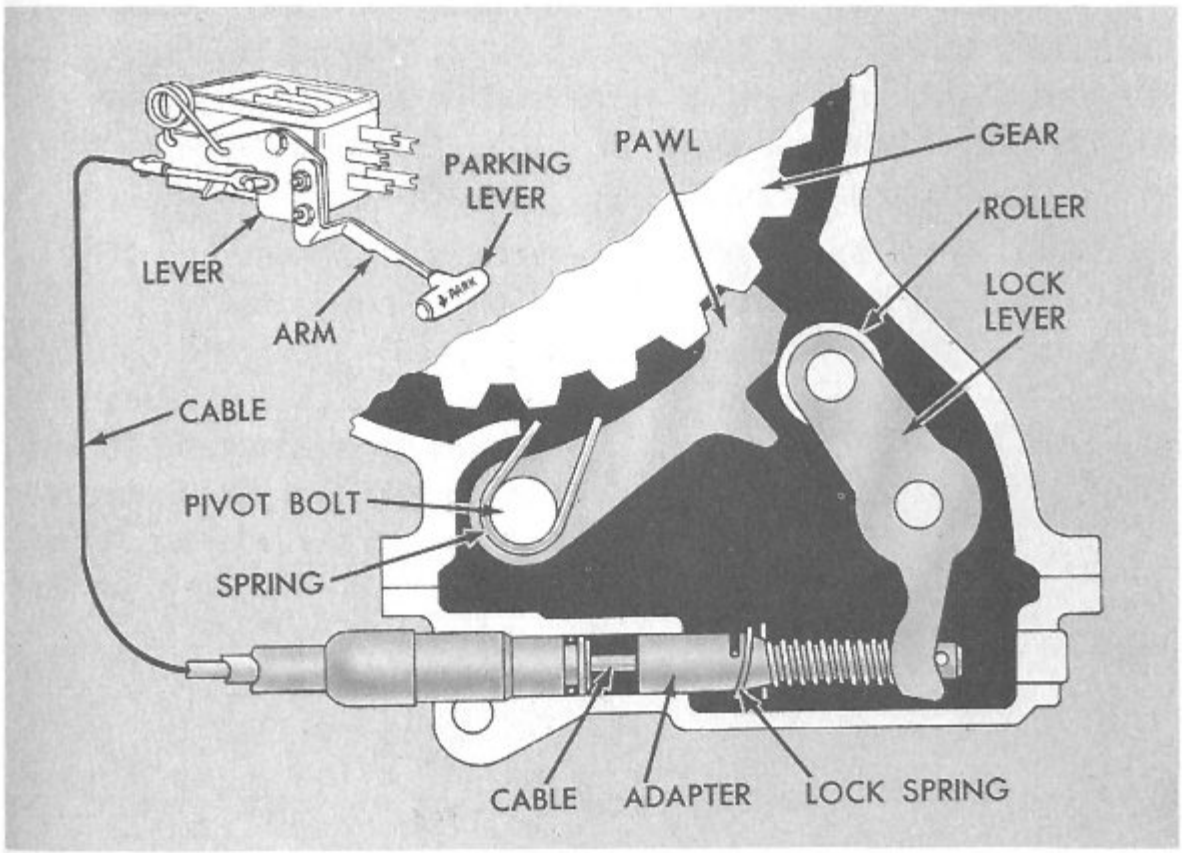
Band Adjustment

The kickdown band adjustment is made in the same manner as previously described, except that the adjusting screw should be turned out 2⅝ turns, to give the correct band adjustment.

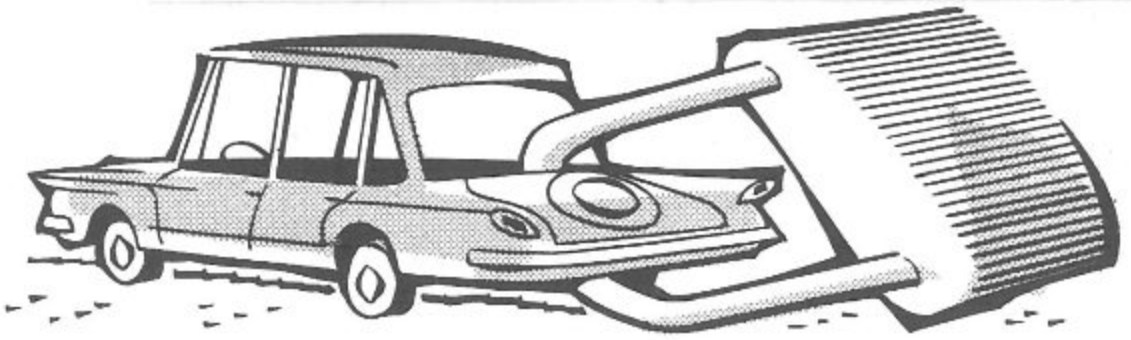
The reverse band adjustment is made in exactly the same manner as previously described.

Parking Lock

Valiant models feature a parking lock on the output shaft. This device consists of a gear, pawl, and Bowden cable operated by a lever on the instrument panel, beside the transmission push buttons. The gear, splined on the output shaft, is just ahead of the governor body. The pawl mounts on a pivot bolt below the gear. A spring around the lower end of the pawl holds it out of engagement with the gear when the car is in motion. The pawl engages the gear through a parking lock lever assembly. This consists of a pivot-mounted lever with a hardened steel roller at its upper end. Both the lever and pivot move on needle-type bearings. The Bowden cable attaches to the panel lever through an adapter, and is retained by a lock spring.



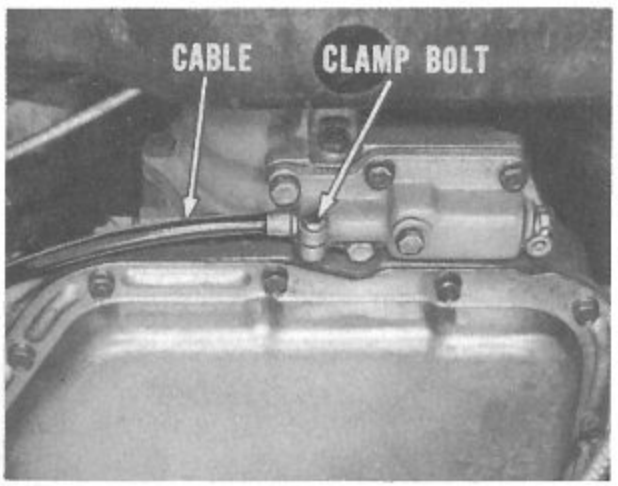
When the parking lever on the instrument panel is in its uppermost position, the lock is "off". When the lever is moved down, the lock is "on". But the lever must be moved *all the way down* so the pawl is *fully engaged* with the gear.



Safety Device. The lever engages the "N" push-button slide and automatically shifts the transmission into neutral and locks it there as long as the lever is down. This prevents the driver from driving with the lock engaged. He must raise the parking lever fully, to disengage the neutral button lock before he can push in any of the other shift buttons.

Parking Lock Adjustment. If the pawl fails to engage with the spring, or if it causes a ratcheting noise, the cable may need adjustment. Here's how that's done. Move the parking lever to "off" position. Back out the Allen screw on early models (or the clamp bolt nut used on later models) enough to release the cable. Two or three turns should be about right.

> **NOTE:** If the nut is turned too much, the opposite end of the bolt might bind on the cable. If the bolt sticks in the housing, tap the nut *lightly* to disengage it.



Next, move the cable in and out to be sure it is engaged securely in the adapter. Then, pull the cable out with moderate force to its limit of travel and secure the screw or nut. Do not overtighten the screw or nut or you might damage the cable housing cover.

Shift Pattern

Valiant models come equipped with only one tire size, but two different axle ratios. Shift patterns that may be expected are listed in the following table:

A-904 TORQUEFLITE (VALIANT) SHIFT PATTERNS

THROTTLE OPENING	SHIFT	VALIANT	
		3.55 to 1 Axle 6.50 x 13 Tires	3.23 to 1 Axle 6.50 x 13 Tires
Closed	1-2 2-3 3-1	7- 9 m.p.h. 10-11 m.p.h. 6- 9 m.p.h.	8-10 m.p.h. 10-13 m.p.h. 6-10 m.p.h.
Wide Open	1-2 2-3	19-22 m.p.h. 45-59 m.p.h.	21-33 m.p.h. 51-65 m.p.h.
Kickdown	3-2 3-1	50-60 m.p.h. 26-36 m.p.h.	55-66 m.p.h. 28-40 m.p.h.

Owners should be cautioned not to exceed 60 m.p.h with the number "2" button in, or 30 m.p.h. with the number "1" button in. Also, they should not push the number "2" or the number "1" button in at car speeds above 60 m.p.h.

SUMMARY

With the new 6-cylinder overhead-valve engine, the A-904 TorqueFlite transmission is designed to provide smooth, effortless, economical performance. Shifts are quick and of unusually fine quality. Shifts have very little gap and very little overlap.

But like any fine, precisely machined mechanism, the transmission requires careful maintenance. And that's where you, as a Master Technician, play your important role in helping to win public acceptance of our latest design improvements. Information in this reference book will help you do your part in this vital job of automatic transmission service.

RECORD YOUR ANSWERS TO THESE QUESTIONS ON QUESTIONNAIRE NO. 145

The new A-904 TorqueFlite transmission fluid is air-cooled.	RIGHT	1	WRONG
At speeds above 40 m.p.h., the number "2" button should not be pushed in for engine braking because the A-904 TorqueFlite will downshift to second and suddenly overload the engine.	RIGHT	2	WRONG
To drain the A-904 TorqueFlite completely, remove two plugs: one in the front edge of the oil pan; the other in the front face of the torque converter.	RIGHT	3	WRONG
Since *both* band adjusting screws are inside the unit, the oil pan must be removed to adjust both bands.	RIGHT	4	WRONG
A-904 TorqueFlite hydraulic action is different because variable line pressure is used instead of compensated throttle pressure.	RIGHT	5	WRONG
Harsh shifting, or clutch slippage during acceleration, can usually be traced to incorrect throttle linkage adjustment.	RIGHT	6	WRONG
Fluid capacity of the A-904 TorqueFlite is seven quarts, U.S. measure, or 5.6 quarts, Imperial measure.	RIGHT	7	WRONG
When checking the transmission fluid level while the fluid is cold, it must come up to the "Add One Pint" mark on the dipstick.	RIGHT	8	WRONG
When the fluid is at normal operating temperature, the level should be between the "Add One Pint" and the "Full" marks on the dipstick.	RIGHT	9	WRONG
One feature of the A-904 TorqueFlite unit is the redesigned one-piece valve body which contains all the same valves as the TorqueFlite A-466 valve body.	RIGHT	10	WRONG

Litho in U.S.A.